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Stephen Jones

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EXAMINER

DYKE, KERRI M

ART UNIT

PAPER NUMBER

2667

DATE MAILED: 11/21/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/945,558	Applicant(s) JONES ET AL.	
	Examiner Kerri M. Dyke	Art Unit 2667	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 04 August 2005.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-10, 12, 14-23, 26-29 and 31-39 is/are rejected.
- 7) ☒ Claim(s) 11, 13, 24, 25 and 30 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 30 August 2001 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Arguments

1. Applicant's arguments with respect to claims 1-39 have been considered but are moot in view of the new ground(s) of rejection.

Drawings

2. New corrected drawings in compliance with 37 CFR 1.121(d) are required in this application because the drawings are informal and it is unclear where most of the labels are pointing. For example, in figure 1 elements 106, 107, and 146 all seem to be pointing to the same line and in figure 2 it is unclear what elements 106 and 118 are pointing to. All of the drawings have at least one instance of ambiguity and thus all of the sheets need to be replaced. Applicant is advised to employ the services of a competent patent draftsman outside the Office, as the U.S. Patent and Trademark Office no longer prepares new drawings. The corrected drawings are required in reply to the Office action to avoid abandonment of the application. The requirement for corrected drawings will not be held in abeyance.

Claim Rejections - 35 USC § 112

3. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
4. Claims 1-39 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
5. Where applicant acts as his or her own lexicographer to specifically define a term of a claim contrary to its ordinary meaning, the written description must clearly redefine the claim

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term and set forth the uncommon definition so as to put one reasonably skilled in the art on notice that the applicant intended to so redefine that claim term. *Process Control Corp. v. HydReclaim Corp.*, 190 F.3d 1350, 1357, 52 USPQ2d 1029, 1033 (Fed. Cir. 1999). The term "processorless" is used in claims 1-39. A processor has several meanings. The term "processor" is commonly used to refer to a computer, the central processing unit of a computer, or a microprocessor, but more generally it is defined by *American Heritage Dictionary* to mean "one that processes, especially an apparatus for preparing, treating, or converting material." The term is indefinite because the specification does not clearly define how the applicant wishes to use the term. The examiner assumes that the applicant is referring to a processor of the type exemplified by the Intel 8086, Athlon 64, or Atmel AVR for the purpose of the following rejection.

6. The term "substantially small" in claims 3, 5, 10, 19-20, 23, and 35 is a relative term which renders the claim indefinite. The term "substantially small" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner suggests amending the specification to include limits on the term substantially small so that one of ordinary skill can ascertain how small substantially small is.

7. The term "substantially" in claims 4 and 8 is a relative term which renders the claim indefinite. The term "substantially" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner suggests amending the specification to include limits on the term substantially so that one of ordinary skill can ascertain the limits of substantially.

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8. The term "substantial number" in claim 24 is a relative term which renders the claim indefinite. The term "substantial number" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner suggests amending the specification to include limits on the term substantially so that one of ordinary skill can ascertain the scope of a substantial number.

9. The term "coincident" in claim 25 is a relative term which renders the claim indefinite. The term "coincident" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. The examiner suggests amending the specification to include parameters for the term coincident. Is the term to be interpreted as occurring at exactly the same time or is there a margin of error and how large is the margin?

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

11. Claims 1-7, 9-10, 14, 17-23, 28-29, 33-34, and 36 are rejected under 35 U.S.C. 102(b) as being anticipated by Nahay (US 4,119,807).

12. In regards to claim 1, Nahay discloses a system, comprising: a first communication node of a plurality of communication nodes (figure 1 element 10) connected with processorless central equipment (figure 1), wherein the first communication node sends one or more first portions of

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node-output information to the processorless central equipment (figure 1 element 14); wherein one or more additional communication nodes of the plurality of communication nodes send one or more additional portions of node-output information to the processorless central equipment (figure 1 element 14); wherein the first communication node receives from the processorless central equipment a portion of central-output information, wherein the portion of central-output information comprises the one or more first portions of node-output information and the one or more additional portions of node-output information (figure 1 elements 30 and 56). Column 3 line 64 – column 4 line 2 discloses the first node receiving output comprising one or more first portions and one or more additional portions.

13. In regards to claim 2, Nahay discloses the system of claim 1, wherein the first communication node sends the one or more first portions of node-output information to the processorless central equipment in a communication frame; wherein the first communication node receives from the processorless central equipment the portion of central-output information in the communication frame (figure 2).

14. In regards to claim 3, Nahay discloses the system of claim 1, wherein the first communication node sends the one or more first portions of node-output information to the processorless central equipment no later than an interval before a start of a communication frame in which the first communication node receives from the processorless central equipment the portion of central-output information, wherein a time duration of the interval is minor relative to a time duration of the communication frame (figure 2). Column 3 lines 30-32 disclose that the interval is very short compared to the frame duration.

15. In regards to claim 4, Nahay discloses the system of claim 3 in combination with a second communication node of the one or more additional communication nodes (figure 1 element 10), wherein the second communication node sends one or more of the one or more additional portions of node-output information to the processorless central equipment (figure 1 element 16) no later than the interval before a start of a communication frame in which the second communication node receives from the processorless central equipment the portion of central-output information (figure 2), wherein the communication frame in which the first communication node receives from the processorless central equipment the portion of central-output information and the communication frame in which the second communication node receives from the processorless central equipment the portion of central-output information comprise an approximately same time duration. Figure 2 discloses that the receiving portion of central-output information comprises the same time duration regardless of the destination.

16. In regards to claim 5, Nahay discloses the system of claim 1, wherein the first communication node sends one of the one or more first portions of node-output information to the processorless central equipment within an interval before a time slot of a communication frame of the portion of central-output information, wherein a time duration of the interval is minor relative to a time duration of the communication frame; wherein the first communication node receives from the processorless central equipment the one of the one or more first portions of node-output information in the time slot of the communication frame of the portion of central-output information (figure 2 and column 5 line 1 – column 7 line 34).

17. In regards to claim 6, Nahay discloses the system of claim 5, wherein the time slot comprises a pre-assigned time slot of a set of time slots that comprises the communication frame

of the portion of central-output information; wherein the first communication node sends one of the one or more first portions of node-output information to the processorless central equipment within the interval before the pre-assigned time slot of the set of time slots that comprises the communication frame of the portion of central-output information; wherein the first communication node receives from the processorless central equipment the one of the one or more first portions of node-output information in the pre-assigned time slot of the set of time slots that comprises the communication frame of the portion of central-output information (figure 2 and column 5 line 1 – column 7 line 34).

18. In regards to claim 7, Nahay discloses the system of claim 6 in combination with the processorless central equipment, wherein the processorless central equipment gates the one of the one or more first portions of node-output information with a clock to obtain the one of the one or more first portions of node-output information in the pre-assigned time slot of the set of time slots that comprises the communication frame of the portion of central-output information (figure 1 and column 5 line 1- column 7 line 34).

19. In regards to claim 9, Nahay discloses the system of claim 5, wherein the time duration of the interval is less than five percent of the time duration of the communication frame. Figure 2 discloses that each frame is composed of 128 samples or intervals. It is therefore inherent that each interval occupies only 1/128 of the time duration of the communication frame, which is less than five percent.

20. Claim 10 is rejected upon the same grounds as claim 5.

21. In regards to claim 14, Nahay discloses the system of claim 1 in combination with a second communication node of the one or more additional communication nodes, wherein the

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second communication node sends one or more of the one or more additional portions of node-output information to the processorless central equipment, wherein the second communication node receives from the processorless central equipment the portion of central-output information (column 5 line 1 – column 7 line 34).

22. In regards to claim 17, Nahay discloses the system of claim 1, further comprising a copper passage of one or more copper passages that serve to connect the first communication node with the processorless central equipment, wherein the first communication node sends the one or more first portions of node-output information to the processorless central equipment over the copper passage. At the time Nahay filed and patented his invention, (1977-78), copper was the standard for phone lines. It is therefore implicit that Nahay expected to use his invention over copper passages.

23. Claim 18 is rejected upon the same grounds as claim 17.

24. Claim 19 is rejected upon the same grounds as claim 4.

25. Claim 20 is rejected upon the same grounds as claim 5.

26. In regards to claim 21, Nahay discloses the system of claim 1 in combination with the processorless central equipment, wherein the processorless central equipment within a communication frame employs the one or more first portions of node-output information and the one or more additional portions of node-output information to produce the portion of central-output information and sends the portion of central-output information to the plurality of communication nodes (figure 1 and column 5 line 1 – column 7 line 34).

27. In regards to claim 22, Nahay discloses the system of claim 1 in combination with the processorless central equipment and the one or more additional communication nodes, wherein

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the first communication node, the processorless central equipment, and the one or more additional communication nodes comprise a time division multiplexing architecture. Nahay discloses using time division multiplexing within the title and column 2 lines 12-14.

28. In regards to claim 23, Nahay discloses the system of claim 1 in combination with the processorless central equipment and a second communication node of the one or more additional communication nodes; wherein the first communication node sends one of the one or more first portions of node-output information to the processorless central equipment within an interval before a first pre-assigned time slot of a first set of time slots that comprises a first communication frame in which the first communication node receives from the processorless central equipment the portion of central-output information and within the interval before the first pre-assigned time slot of a second set of time slots that comprises a second communication frame in which the second communication node receives from the processorless central equipment the portion of central-output information, wherein the first and second communication frames comprise an approximately same time duration, wherein a time duration of the interval is minor relative to the approximately same time duration of the first and second communication frames; wherein the second communication node sends one of the one or more additional portions of node-output information to the processorless central equipment within the interval before a second pre-assigned time slot of the first set of time slots that comprises the first communication frame in which the first communication node receives from the processorless central equipment the portion of central-output information and within the interval before the second pre-assigned time slot of the second set of time slots that comprises the second communication frame in which the second communication node receives from the processorless

central equipment the portion of central-output information; wherein the processorless central equipment gates the one of the one or more first portions of node-output information with a clock to obtain the one of the one or more first portions of node-output information in the first pre-assigned time slot of the first set of time slots and in the first pre-assigned time slot of the second set of time slots; wherein the processorless central equipment gates the one of the one or more additional portions of node-output information with the clock to obtain the one of the one or more additional portions of node-output information in the second pre-assigned time slot of the first set of time slots and in the second pre-assigned time slot of the second set of time slots; wherein the first communication node receives the one of the one or more first portions of node-output information in the first pre-assigned time slot of the first set of time slots and the one of the one or more additional portions of node-output information in the second pre-assigned time slot of the first set of time slots; wherein the second communication node receives the one of the one or more first portions of node-output information in the first pre-assigned time slot of the second set of time slots and the one of the one or more additional portions of node-output information in the second pre-assigned time slot of the second set of time slots (figures 1-2 and column 5 line 1 – column 7 line 34).

29. In regards to claim 28, Nahay discloses the system of claim 1 in combination with the processorless central equipment, wherein the processorless central equipment comprises first processorless-central equipment, wherein the portion of central-output information comprises a portion of first central-output information, and further comprising second processorless-central equipment that is connected with the plurality of communication nodes; wherein the first communication node sends the one or more first portions of node-output information to the first

processorless-central equipment and to the second processorless-central equipment, wherein the one or more additional communication nodes send the one or more additional portions of node-output information to the first processorless-central equipment and to the second processorless-central equipment; wherein the first communication node receives the portion of first central-output information from the first processorless-central equipment (figure 1).

30. In regards to claim 29, Nahay discloses the system of claim 28, wherein the first communication node receives the portion of first central-output information from the first processorless-central equipment and a portion of second central-output information from the second processorless-central equipment, wherein the portion of second central-output information comprises one or more of: the one or more first portions of node-output information; and the one or more additional portions of node-output information (figures 1-2).

31. In regards to claim 33, Nahay discloses the system of claim 1 in combination with the plurality of communication nodes, wherein each of the plurality of communication nodes sends a corresponding one or more portions of node-output information to the processorless central equipment, wherein each of the plurality of communication nodes receives from the processorless central equipment the portion of central-output information, wherein the portion of central-output information comprises all the portions of node-output information (figures 1-2 and column 5 line 1 – column 7 line 34).

32. Claim 34 is rejected upon the same grounds as claim 1.

33. Claim 36 is rejected upon the same grounds as claim 33.

Claim Rejections - 35 USC § 103

35. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

36. Claims 8 and 35 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Sulzbacher et al. (US 4,835,764).

37. In regards to claims 8 and 35, Nahay discloses the system of claim 5 and the method of claim 34, but not wherein the time duration of the interval is approximately equal to a maximal expected signal-propagation delay between the processorless central equipment and the plurality of communication nodes over a respective plurality of operable passages.

Sulzbacher discloses setting the interval to the length of the signal propagation delay in column 1 lines 33-34.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay by setting the interval length equal to the signal propagation delay, as taught by Sulzbacher, because doing so allows for maximum range, as taught by Sulzbacher in column 2 lines 1 – 19.

38. Claims 12 and 31-32 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Kopec et al. (US 5, 883,986).

39. In regards to claims 12 and 31-32, Nahay discloses the system of claim 1, wherein the first communication node sends one of the one or more first portions of node-output information to the processorless central equipment; wherein the first communication node receives from the

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processorless central equipment the one of the one or more first portions of node-output information in a time slot of a communication frame of the portion of central-output information; but not wherein the first communication node compares one or more values of the one of the one or more first portions of node-output information with one or more values from the time slot of the communication frame of the portion of central-output information to check correctness of operation of one or more portions of the system.

Kopec et al. discloses comparing the values in order to check correctness in column 2 lines 5-50.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay by including means for checking correctness, as taught by Kopec et al. because error detection allows for correction and presentation of a final, error-free product, as taught by Kopec et al. in column 2 lines 1-4.

40. Claims 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Lang (US 5, 057,932).

41. In regards to claims 15-16, Nahay discloses the system of claim 1, but not further comprising a fiberoptic passage of one or more fiberoptic passages that serve to connect the first communication node with the processorless central equipment, wherein the first communication node sends/receives the one or more first portions of node-output information to the processorless central equipment over the fiberoptic passage.

Lang discloses using fiberoptic passages in the abstract.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay in order to use fiberoptics, as taught by Lang because fiber carries signals great distances faster and with more accuracy, as disclosed by Lang in column 8 lines 15-17.

42. Claim 26 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Thompson (3,649,763).

43. In regards to claim 26, Nahay discloses the system of claim 1 in combination with the processorless central equipment, wherein the first communication node sends one of the one or more first portions of node-output information to the processorless central equipment in a time slot, not assigned to the first communication node, of a first set of time slots that corresponds to a time slot, not assigned to the first communication node, of a second set of time slots of the portion of central-output information; but not wherein the processorless central equipment withholds the one of the one or more first portions of node-output information from the time slot, not assigned to the first communication node, of the second set of time slots of the portion of central-output information through clock gating of the one or more first portions of node-output information in the time slot, not assigned to the first communication node, of the first set of time slots.

Thompson discloses preventing the information from entering a time slot it is not assigned to in column 22 lines 46-51.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay in order to prevent the portion of information from entering a time slot it is not assigned to, as taught by Thompson because doing so prevents the erroneous overwriting of information, as taught by Thompson in column 1 lines 45-55.

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44. Claim 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Layland et al. (US 4,112,497) .

45. In regards to claim 27, Nahay discloses the system of claim 1 in combination with the processorless central equipment, wherein the processorless central equipment employs one of the one or more first portions of node-output information, and a clock, but not a plurality of flip-flops to determine a zero or more amount of delay to assert for relative synchronization between a stable part of the one of the one or more first portions of node-output information and a clock edge that is employed to produce the portion of central-output information.

Layland et al. disclose using flip-flops for synchronization in column 11 lines 45-55.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay in order to synchronize the information and clock using flip-flops, as taught by Layland et al. because correlation of the signal is crucial, as taught by Layland et al. in column 1 lines 15-34.

46. Claims 37 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Gregg et al. (US 6,779,129).

47. Claim 37 is comparable to claim 1 and claim 39 is comparable in limitations to claim 33, which are taught by Nahay. Nahay does not teach the additional limitation of a computer-readable-signal-bearing medium.

Gregg et al. discloses a signal bearing medium in column 4 lines 55-67.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay to include a signal-bearing medium, because a signal-bearing medium facilitates distribution as taught by Gregg et al. in column 4 lines 55-67.

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48. Claim 38 is rejected under 35 U.S.C. 103(a) as being unpatentable over Nahay (US 4,119,807) in view of Kopec et al. (US 5, 883,986) further in view of Gregg et al. (US 6,779,129).

49. Claim 38 is comparable to claim 12, which is taught by Nahay and Kopec et al. Nahay and Kopec et al. do not teach the additional limitation of a computer-readable-signal-bearing medium.

Gregg et al. discloses a signal bearing medium in column 4 lines 55-67.

It would have been obvious to one of ordinary skill in the art to modify the system of Nahay to include a signal-bearing medium, because a signal-bearing medium facilitates distribution as taught by Gregg et al. in column 4 lines 55-67.

Allowable Subject Matter

50. Claims 11, 13, 24-25, and 30 would be allowable if rewritten to overcome the rejection(s) under 35 U.S.C. 112, 2nd paragraph, set forth in this Office action and to include all of the limitations of the base claim and any intervening claims.

Conclusion

51. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Crisson et al., Reier, and van Mil et al. are examples of other processorless conference calling systems.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Kerri M. Dyke whose telephone number is (571) 272-0542. The examiner can normally be reached on Monday through Friday, 8:00 am - 4:00 pm.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chi Pham can be reached on (571) 272-3179. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

kmd


CHI PHAM
SUPERVISORY PATENT EXAMINER
ELECTRONIC BUSINESS CENTER
11/10/05